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DEPARTMENT OF INDUSTRIES AND LABOUR
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ELECTRICAL INSPECTION BRANCH

HON. DR. J. L. ROBINSON, MINISTER
J. E. OBERHOLTZER, DEPUTY MINISTER
EDMONTON

QUARTERLY BULLETIN

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SIXTH EDITION - CANADIAN ELECTRICAL CODE.

A meeting of the Part I Committee of the Canadian Electrical Code was held in Ottawa on June 2nd to 6th, inclusive, to review the drafts for the Sixth Edition. With minor exceptions, the drafts were all approved and will now be printed in galley-proof form for final review. This galleyproof is expected to be available early in October and will be reviewed by the full committee late in October or early in November. It is, therefore, anticipated that the Sixth Edition will be available for distribution some time early in 1953.

ELECTRICAL INSTALLATIONS IN THE OIL FIELDS.

A great number of installations made in the oil fields are not specifically covered in the Canadian Electrical Code or the Electrical Protection Act Regulations. It was, therefore, decided that in the interests of uniformity, it would be advisable to draft Regulations covering the various types of installations which were becoming quite common throughout the Province. These Regulations were drawn up and fully discussed with the other Government Departments concerned and with representatives of the oil industry. They were adopted by Order in Council in February, 1952, and are now available in pamphlet form, free of charge, on request to the Electrical Inspection Branch. Contractors, planning to make any installations in the oil fields, should obtain and study a copy of these Regulations before proceeding with any work. It is, also, intended to have prints available in the near future outlining the various methods of installation which are acceptable. These prints will be available from the Inspection Department offices, at cost.

DOUBLE THROW SWITCHES FOR STANDBY FARM LIGHTING PLANTS.

When rural customers obtain service from electric supply companies, they often retain their own plants for standby service. Unless a double throw switch is provided, there is a danger of these plants feeding back through the transformer and energizing the power line, thereby creating a hazard to linemen who may be working on it. In such cases, the plant would also be connected to all the adjacent customers and obviously would be overloaded. For this reason, it is necessary to install a double throw switch, either on the transformer pole directly below the power company's meter box, or on a separate pole placed about 20 feet from the transformer pole. This switch must be enclosed in a weather-proof box and should be connected so that the power supply from the standby plant comes to one side of the switch and from the power company to the other side of the switch. The farm load is then connected to the middle terminals and the position of the switch determines which souce it is supplied from. If it is installed on the transformer pole, care must be taken not to interfere with the climbing space for the linemen and permission should be obtained from the power company concerned. If further details are desired on this method of installation, they are available on request from the Inspection Department.

PERMITS.

A considerable number of permit applications are still being forwarded to the Calgary office, rather than to Edmonton. This causes a delay of about three days of issuing permits, as they all must be forwarded to the Electrical Inspection Branch, Department of Industries and Labour, Provincial Building No. 2, Edmonton. The return address of the sender should be placed on the envelope in which the permits are forwarded to the Inspection Branch. It has, also, been noted that in many instances, permits are not being applied for until the work is nearly completed. This frequently causes delay and inconvenience to the customer as the permit may not be available when service is desired. It also makes it quite difficult to plan routine inspection trips to cover work in progress. The Permit Regulations specifically state that permits are to be applied for before the work is started and inspectors have now been instructed to report the contractors who ignore this requirement.

TRAILER PERMITS AND WIRING.

Trailers may be provided with their own service equipment for connection directly to a power line or provided with a male plug suitable for connecting to a trailer camp outlet. Where trailers are likely to be used for both types of service, both types of connection are provided. Where provision is made for both types of service, it is the custom to fuse both sides of the circuit. This is felt necessary due to the fact that frequent reconnection is found to result in the neutral being reversed in some cases. The permit fee for trailers not previously inspected is $1.50, being based on the temporary service connection fee. The inspector checking the electrical installation will issue a clearance slip to the owner if it is satisfactory and no further permit will be required for reconnection at any other location.

TEMPORARY SERVICES.

Referring to an item in the October 1950 Quarterly Bulletin, it is again emphasized that, at least, one polarized three wire outlet must be installed at each temporary service together with a suitable ground. It is pointed out that portable tools likely to be used in construction work are required to be equipped with three wire cables and three wire caps. Failure to provide a three wire receptable for the use of these tools results in the three wire cap being removed and a two wire cap being used in place of it. No ready means are then available for grounding the non-current carrying metal of these tools. A serious accident occurred last fall which in part could be attributed to the breakdown of insulation on a portable tool and it is, therefore, felt essential that temporary services be installed in the manner described above.

PAINT SPRAY BOOTHS.

Many garages and service stations have a small area set aside for touch-up patching jobs, in which the amount of painting done is very limited. It is not felt that the requirements in such cases should be so stringent as those in effect where complete re-paint jobs are being carried on continuously. Providing the following precautions are taken in such cases, it is felt that very little hazard will exist: the electrical equipment in the room should be limited, as far as possible, and switches and standard receptacles should be kept on the outside of the room. The paint spray compressor should be located outside and the spray hoses only taken into the room. Lighting should preferably be obtained through glass panels in ceilings or walls; alternatively, enclosed lighting units could be used. Ventilation should be provided and if the motor driving the fan is in the air duct, it should be of a totally-enclosed type. Extension lamps, if used, should be of Type S cord, with an enclosed and guarded lamp receptacle.

SERVICE INSULATOR SUPPORTS ON METAL BUILDINGS.

Where a service drop is run to a metal building, a 2 X 4 or 2 X 6 should be provided for the attachment of the service drop insulators. Fastening such insulators directly into the building with a metal covering is considered to constitute a hazard, as a breakdown of the insulator will energize the building and probably cause a short circuit. The wooden support for the insulator should be fastened securely and if necessary a bolt should be carried through to the inside of the building.

TWIST-ON TYPE OF CONNECTORS.

At a recent meeting of the C.S.A. Approvals Council, a review was made of the tests on twist-on connectors, to determine if their use could not be approved more extensively. The possibility of these connectors loosening under vibration had been considered and quite severe tests had been evolved to determine whether this was at all likely. In addition the connectors were subjected to 65 pound pull tests between conductors before being approved. In view of the fact that certain type connectors passed these tests, it was generally agreed that they should be acceptable for general connection service in junction boxes as well as to fixtures. The important thing to keep in mind when using these connectors was to make sure that they are of the correct size for the conductors being used. It was generally agreed by the Inspection Authorities represented that these twist-on connectors could well be accepted for general use, pending further field experience.